

obtaining a public key of the dial-in user;
verifying the reconstructed signed response string using the server-side cryptographic function;
reading the security device by a card reader;
encoding the signed response string;
decoding the signed response string;
forwarding the challenge string to the dial-up client;
forwarding the challenge string to the PKI-Bridge; and
forwarding packets from the custom script dynamically linked library.

- [c35] An apparatus of integrating via a dial-up interface, comprising:
- means for sending session initiation information from a dial-up client to a PKI-Bridge;
 - means for checking session initiation information by the PKI-Bridge;
 - means for generating a challenge string by a server-side cryptographic function;
 - means for forwarding the challenge string to a custom script dynamically linked library;
 - means for forwarding the challenge string to a client-side cryptographic function from the custom script dynamically linked library;
 - means for retrieving a private key from a security device;
 - means for generating a response string;
 - means for signing the response string with the private key of a dial-in user;
 - means for forwarding a signed response string to the custom script dynamically linked library;
 - means for dividing the signed response string into packets;
 - means for forwarding packets to the PKI-Bridge;
 - means for reconstructing the signed response string from packets;
 - means for forwarding a reconstructed signed response string to the server-side cryptographic function;

means for obtaining a public key of the dial-in user; and
means for verifying the reconstructed signed response string using the server-side
cryptographic function.